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Abstracts of 54 studies in agricultural education completed in the American Vocational Association Southern Region in the years 1967-68 are included in this mimeographed document. Represented are staff studies, doctoral dissertations and masters theses. The individual abstracts include the purpose, method, and findings of the study. (DM)

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SUMMARIES OF STUDIES IN AGRICULTURAL EDUCATION SOUTHERN REGION, 1967-68

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SUMMARIES OF STUDIES IN AGRICULTURAL EDUCATION
SOUTHERN REGION, 1967-68

ALTMAN, CHARLES DWAIN and LARRY JULIAN SMITH. Student Interest and Employment Opportunities in the Field of Ornamental Horticulture in Pickens County, South Carolina. Master's Study, 1968, Clemson University. 19 p. Department of Agricultural Education and Research Coordinating Unit, Clemson, South Carolina.

Purpose.--The purposes of the study were: (1) to determine if Pickens County high school students were interested in a course in ornamental horticulture, and (2) to determine whether there were employment opportunities for graduates of a high school ornamental horticulture course in Pickens County, South Carolina.

Method.--A 30-minute presentation of careers in ornamental horticulture was given to all of the eighth grade boys in public schools in Pickens County by the investigators. Following this, the students were asked to complete an inquiry form indicating their interests in certain after-school activities and some information on their home backgrounds.

They were then asked to discuss their interest in enrolling in a vocational horticulture course with their parents. Two to four weeks later those students who desired to enroll in such a course visited their guidance counsellor and completed another form designed to determine reasons for their interest.

In addition, 14 horticultural firms were contacted to determine employment opportunities.

Findings.--In response to the first questionnaire, 38.3 per cent of the eighth grade boys showed an interest in studying about plants in a one semester course in high school. About 15 per cent of the boys were interested in studying about plants in a two-year vocational course in high school; 18.5 per cent would like to study about plants in college.

There were no marked differences in interests and part time work activities between boys who were planning to enter college and those who intended to seek employment. The only exception was concerning landscape design. Of those who were planning to go to college, 50 per cent said that they would like to know more about landscape design, whereas only 29 per cent of the noncollege bound checked landscape design.

Of the total group of boys who answered the initial questionnaire, 61 per cent reported back to complete the second questionnaire, thereby indicating their intention to enroll in an ornamental horticulture course in high school.

The 14 horticultural firms surveyed were employing a total of 63 full time and 24 part time helpers. In employee selection all firms would give preference to high school graduates who had taken a two-year program in ornamental horticulture. Twelve of the firms

reported that they would consider employing high school students studying horticulture as part time help.

ANDERSON, JOHN NORMAN. A study of Certain Conditions Relating to the Selection and Introduction of Options in Vocational Agriculture. Thesis, M. S., 1968, Virginia State College. 53 p. Library, Virginia State College, Petersburg.

Purpose.--To study certain characteristics of instructional programs of teachers who were initiating the revised course of study in selected counties of Virginia.

Method.--The writer was able to classify the instructional offerings under agricultural production, agricultural business, forestry and conservation, agricultural machinery sales and service and ornamental horticulture. A questionnaire was developed and the selected teachers were asked to supply the requested information. A selected panel of six teachers and an area supervisor was constantly employed in an advisory capacity.

Findings.--While traditional programs were most frequently reported, the summary which follows indicates the character of participation, along with certain related problems. (1) Twenty-five teachers selected the option in Production Agriculture. (2) Seventeen teachers made the selection of options on the basis of the needs of the students, and a similar number of teachers reported that the basis was the availability of equipment and facilities. (3) Seventeen teachers indicated that the lengths of the class periods were not long enough. (4) Reports of being adequately trained to teach the selected options were evident from the replies of seventeen teachers, yet thirteen teachers indicated that they needed additional training. (5) More frequent statements by teachers of the need for additional information were associated with the options in Ornamental Horticulture and Agricultural Machinery Sales and Service. (6) Opportunities for employment in general farming lead the list of job possibilities. Yet, on the other hand, this same area also showed the largest number of cases where no opportunities exist. (7) From the point of view of percentages, the Dairy Industry and the Animal Industry revealed the more favorable employment situations over the next five years. (8) Availability of employment in Agricultural Business will increase materially within the next five years, with supplies' managers being in the greater demand. (9) Welders and Machinery Mechanics will continue to find many employment opportunities. In addition, openings for Machinery Partsmen, Salesmen and Office Managers will increase. (10) The respondents indicated that there will be job opportunities in Forestry and Conservation during the next five years, with the need for workers in seven areas. (11) The number of good opportunities for employment in Ornamental Horticulture more nearly approached the number of limited opportunities than in any of the other options studied. (12) Good employment

opportunities in other areas of Agriculture showed an increase, with a corresponding decrease in the absence of opportunities. (13) Limited reports of the adequacy of references and other teaching aids were evident in each of the five options. (14) The respondents indicated that office supplies and equipment were available to a rather satisfactory degree.

BASS, B. C. Educational Needs and Employment Opportunities in Non-Farm Agriculture. Staff Study, 1968, Department of Agricultural Education, Virginia Polytechnic Institute, Blacksburg. 35 p.

Purpose.--(1) To determine by a survey of non-farm agricultural businesses (a) the present and future prospects for employment, (b) the extent to which present and entering workers needed agricultural knowledge and competence and the vocational and technical subject matter areas in which they needed training, and (c) the opportunities for on-the-job training; (2) to develop guidelines for a course of study to provide the vocational and technical training found to be needed; and (3) to determine the extent prospective students were interested in enrolling for training to prepare for employment in such businesses.

Method.--Data were collected and recorded on pretested forms by interviewers who were employed locally.

Findings.--The managers of the 125 participating firms expected to employ 89 persons per year during the ensuing five years. Sixty-five per cent of the 5,649 workers needed one or more agricultural competencies to properly perform their duties. One-third of the workers were producing agricultural products to increase their incomes. Several hundred of the employees needed training in practically every subject matter area investigated. Opportunities for on-the-job training were abundant.

An adequate number of high school students and out-of-school young men for a class in each high school area expressed a desire to take training to qualify for employment in an agricultural business or service. A majority of those who desired such training preferred either a high school credit course or on-the-job training. Relatively few wanted to enroll in a non-credit night class.

Some suggested guidelines were prepared for developing and conducting the technical and vocational training found to be needed.

BEAMON, LEE ALVIN. A History of Vocational Education in Agriculture Among Negroes in Virginia. Thesis, M. S., 1968, Virginia State College, 62 p. Library, Virginia State College, Petersburg.

Purpose.--To trace the series of vocational acts and events in vocational education in agriculture which influenced the Negro program in Virginia since 1917.

Method.--Available sources of information relating to the program were reviewed. Interviews were held with the personnel in the State Department of Education and members of the teacher-education staff at Virginia State College. Factual information was obtained during each initial interview followed by subsequent visits for the purposes of analyzing and synthesizing the data.

Findings.--(1) The Negro program of vocational education in agriculture which began in 1918-19 with five schools and eighty-four enrollees, grew to fifty-eight schools and 3610 all-day enrollees in 1961. (2) The curriculum in vocational agriculture changed from its simple design during the first ten years to a more expanded one by 1961 to embrace the scientific and highly mechanized types of present-day farming and agriculture. (3) Advisory councils have made a significant contribution to the overall success of the program of vocational agriculture. (4) Teachers, intermittently, through the years, have been difficult to employ. (5) Farm forestry contributed much of the development of the curriculum. (6) The transition of the state from rural to urban living affected the character of the training in vocational agriculture. (7) Difficulty was experienced in gaining support for vocational education for Negroes during the early years. (8) The war training program in vocational agriculture helped provide training and jobs for men who had served their country in the armed forces. (9) Teachers of vocational agriculture served with distinction during the depression in helping rural people recover and strengthen the total agricultural program. (10) Farm shop instruction gained considerable importance during the late 1940's. (11) The New Farmers of America did much to provide training in leadership and self-discovery among rural boys. (12) Adult education in Virginia had its beginning in vocational agriculture.

BENSON, WILBUR E. Vocational Agriculture Teachers' Perception of Vocational Agriculture Occupational Training in Oklahoma. Report, M. S., 1968, Oklahoma State University, 35 p. Department of Agricultural Education, Oklahoma State University, Stillwater.

Purpose.--In this study an attempt was made to determine vocational agriculture teachers' perception of Vocational Agriculture Occupational Training and to find differences in perceptions according to school size.

Method.--The information used in this study was obtained by a mail questionnaire. Sixty questionnaires were mailed out to a stratified random sample of Oklahoma vocational agriculture teachers. Fifty-four were received for a 90 percent return. The Oklahoma State University computer center was used to analyze the data.

Findings.--It was found that vocational agriculture teachers have a favorable attitude toward Vocational Agriculture Occupa-

tional Training. School size had no significant effect on teacher perception of Vocational Agriculture Occupational Training. Teachers perceived cooperative occupational experience to be a very necessary part of Vocational Agriculture Occupational Training and believed that high school credit should be given for cooperative occupational experience.

BLANKENSHIP, EDWARD E. The Occupational Status and Educational Needs of Agricultural Education Graduates of Texas Technological College. Thesis, M.S., 1968, Texas Technological College. 111 p. Library, Texas Technological College, Lubbock.

Purpose.--The purposes of this study were to determine the occupational status of graduates from the Department of Agricultural Education at Texas Technological College, to obtain information which would be of value in student counseling to the Agricultural Education Staff at Texas Technological College, and to determine the graduates' evaluation of courses completed during college.

Method.--The scholastic records and questionnaires returned by the departments graduates were the sources of data for this study. A total of 255 graduates were included in this study.

Findings.--A total of 227 (89.0 percent) agricultural education graduates had been enrolled in vocational agriculture in high school. Only 5 of the 88 alumni who were agricultural teachers had not completed any vocational agriculture in high school.

At the time this study was conducted, 34.5 percent (88) of the graduates were agricultural teachers, 25.9 percent (66) were in "off-farm agricultural" occupations, and 9 percent (23) of the graduates were non-agricultural teachers. Seven and one-tenth percent (18) of the graduates were farmers and/or ranchers, 4.7 percent (12) were school administrators, 3.9 percent (10) were in the military service, and only 1 respondent was a full-time graduate student.

Graduates were asked to evaluate the courses which they had completed while attending Texas Technological College. The courses were evaluated on the basis of their importance to the graduate's occupation at the time this study was conducted.

The six specific agricultural education courses were ranked by all the graduates as follows in descending order: student teaching, advanced agricultural mechanics, methods in adult agricultural education, methods of teaching vocational agriculture in high school, methods in supervised farming and future farmer work, and the course the agricultural industry.

The five agricultural courses receiving the highest ranking were as follows: fundamental principles of genetics, principles of feeding, introductory entomology, range management principles and practices, and range plants.

The four highest ranking non-agricultural courses were speech, technical writing, college rhetoric, and botany.

BLANTON, LLOYD HOUSTON. Recruitment and Student Success: Students of Agricultural Education at Clemson University, 1959-1967. Master's Study, 1968, Clemson University, 70 p. Department of Agricultural Education and Research Coordinating Unit, Clemson, South Carolina.

Purpose.--This was an investigation of the influence of selected variables upon the recruitment and subsequent success of students in agricultural education at Clemson University. The variables included: location of students homes in relation to the University, entrance examination (SAT) scores, cumulative grade point ratio, changes in major field of study, and high school rank in class.

Method.--Data were compiled from the cumulative records of students who had completed at least one semester in the agricultural education program between June 1, 1959 and July 31, 1967. The analysis included statistical tests for significance of differences when appropriate.

Findings.--Distance from Clemson was not a limiting factor in recruiting agricultural education students since the homes of the greatest number were farthest from the University. College Entrance Examination Board Scholastic Aptitude Test (SAT) scores were equal for students from all areas of the State. The agricultural education students scored relatively higher on the mathematical section than on the verbal section of the SAT.

Those students who had completed high school in other states scored higher on the verbal section of the SAT than students from South Carolina high schools.

Students who transferred from other departments earned higher grade point ratios than those who started as agricultural education students even though there was no difference in entrance examination (SAT) scores of the two groups.

Entrance examination scores were not of value in predicting success in college; SAT scores were equal for graduates and drop-outs. No meaningful relationship was found between entrance scores and grades made by the students. Also, there was no predictable relationship between rank in high school class and the entrance scores.

Rank in high school class was found to be a valuable predictor of success in college for the population studied.

BUNCH, DONALD KEITH. An Analysis of Courses, Course Content, and Subject Matter Areas most Appropriate for use in Development of a Master's Degree in Extension Education for Youth Workers. Report, M. S., 1968, Oklahoma State University, 43 p. Department of Agricultural Education, Oklahoma State University, Stillwater.

Purpose.--The purpose of this study was to gain insight through an evaluation of opinions and judgments submitted by agents into the type of courses which should be included in the curriculum for Extension Youth Workers. The respondents were Extension Agents working directly with 4-H programs.

Method.--A questionnaire for securing information was devised and distributed to randomly selected Extension Agents, divided into four groups: Agents with 1-5 years of service; Agents with 6-10 years of service; Agents with 11-20 years of service; and Agents with over 20 years service.

Findings.--Information gathered from the questionnaire revealed a desire on the part of the younger agents to participate in more courses in applied psychology, and sociology as well as teaching methods. The courses that are involved in the leadership and character development of youth, received the highest rating by agents in all groups. The agents expressed concern that so little interest had been shown in developing an extensive professional improvement program for County Extension Agents. The agents also expressed desire to pursue an advanced degree. Agents in the older age group seemed to rank the courses higher if they had previously taken them. The group of agents who are or have recently become County Extension Directors expressed a need for courses in office management, personal management, and office machines.

CAMERON, WALTER A. Two Laboratory Approaches For Teaching Basic Woodworking Technology to Students in Agricultural Mechanics Education. Thesis, M.S., 1967, Virginia Polytechnic Institute, 264 p. Library, Virginia Polytechnic Institute, Blacksburg.

Purpose.-- (1) To select and develop two laboratory approaches for teaching basic woodworking technology to students in Agricultural Mechanics. (2) To compare student performance of the two laboratory approaches both on the college level and on the high school level.

Method.--The development phase of this study involved the selection and preparation of desired student behavioral outcomes, curriculum content and materials, two laboratory teaching methods,

and student performance measuring instruments for basic woodworking technology. One trial comparison experiment was conducted on the college level with two matched groups of juniors enrolled in Agricultural Mechanics at Virginia Polytechnic Institute. Each group consisted of eight students. One experiment was conducted on the high school level with two matched groups, each consisting of six high school sophomores. The project-oriented laboratory teaching method was selected for use by the control groups of each experiment. The method used by the experimental groups in both experiments was the "timed-learning experience laboratory method". This method was developed by the writer.

Findings.--The following conclusions were formulated from the data collected in the experiments: (1) In the college experiment the students taught by the "timed-learning experience laboratory method" had a greater percentage of gain on both the written and the laboratory test than the students taught by the project-oriented method. (2) In the high school experiment the students taught by the "timed-learning experience laboratory method" had a greater average percentage of gain on both the written and the laboratory test than the students taught by the project oriented method.

CARTER, RICHARD IRA. A Comparison of Mechanical Abilities between State FFA Interscholastic Farm Shop Contest Participants and Non-participating Oklahoma Vocational Agriculture Students. Thesis, M.S., 1968, Oklahoma State University, 56 p. Library, Oklahoma State University, Stillwater.

Purpose.--Objectives of the study were to compare the mechanical abilities of the following groups of Oklahoma vocational agriculture students: Group A - students participating in the 1967 State FFA Interscholastic Farm Shop Contest from schools which had been represented in the contest at least two years (1964-1966); Group B - random sample of students not participating in the 1967 Farm Shop contest from the same schools as Group A; and Group C - random sample of students not participating in the 1967 Farm Shop Contest from a stratified random sample of schools which had not been represented in the contest since 1964. Another objective of the study was to determine if a relationship existed between the students' mechanical ability and their contest achievement.

Method.--The students in the sample were given the "Prognostic Test of Mechanical Abilities" and the school means for each group were computed. From the school means the three group means were tabulated and the differences determined.

Findings.--The t test was used to test for significant differences in mechanical ability among the three groups. There were no significant differences at the .05 level in the means of

groups. However, there was a significant relationship between contest achievement and students' mechanical abilities on four of the five sub-tests (Arithmetic Computation, Reading Drawings and Blueprints, Spatial Relationships and Checking Measurements). No relationship was found on the Identification and Use of Tools Test. The results of this study show that mechanical aptitude tests could be used in the selection of students for similar farm shop contests.

CARPENTER, EARL T. and DAVID N. COILE. The Occupational Structure of Dillon County, South Carolina. Staff Study, 1968, Clemson University. 110 p. Research Coordinating Unit for Vocational Education, Clemson, South Carolina.

Purpose.-- The basic purpose was to determine the total employment situation in one county. This was to include the type of firms represented and various characteristics of the workers and employment situations by job title.

Method.--Hired interviewers made a complete canvas of nonfarm establishments in the county. Each firm providing employment for one or more workers was included. Farmers and farm workers as reported in the 1964 Census were added to give the total count of workers for the County.

Findings.--Interviews were conducted in 902 firms which is the total number of nonfarm establishments that were found providing gainful employment for one or more workers. Three-fourths of these firms employed five or fewer workers; 236 were single-employee concerns. Firms with five or fewer workers accounted for one-fifth of the total nonfarm employment.

All of the broad industry divisions which have been classified by the U. S. Office of Statistical Standards were represented in the County Except for mining. When the 1,567 farms were included, the agriculture, forestry and fisheries firms accounted for about two-thirds of all firms. The next largest groups were wholesale and retail trade, and services.

The nonfarm work force was found to total 7,346 workers, most of whom were full time employees. Eleven per cent were part time and six per cent were seasonal workers. Women held 43 per cent of the positions. The job level having the greatest number of workers was professional, technical and managerial representing 22 per cent of all workers. Semi-skilled (20 per cent) and skilled (16 per cent) were next.

Increases in the number of workers were expected for each of the two years following the enumeration. These came to 3.9 per

cent in 1969 and 4.2 per cent in 1970. Manufacturing industries anticipated the greatest increase (17 per cent for the two years). Skilled jobs were expected to increase most (27 per cent).

A total of 1,336 employment opportunities occurred during the year prior to the enumeration. These amounted to almost one opportunity for each five positions. Two-thirds were to replace workers who had left their jobs, and the rest were for new positions and vacancies existing at the time of the survey.

When farmers and farm workers were added, the total work force for the County came to 10,827.

Based on current hiring practices, nearly one-half of the positions could be filled by persons who had not completed high school. However, respondents recommended this educational level as a minimum for only one-fourth of the positions. One-half of the positions could be filled by persons 18 to 19 years of age or younger. Difficulty in securing employees was in evidence since 45 per cent of the positions were regarded as hard to fill. Almost one-half of the positions could be filled by handicapped workers. For about one-fifth of the positions, some form of compensation would be granted if the workers attended specialized vocational courses. In locating new employees, the firms nearly always used informal means such as friends and employees recommendations, and persons dropping in seeking employment.

More than nine of every ten workers were said to need abilities taught in vocational education courses. Many of the workers needed skills from several of the vocational education programs. The greatest numbers of workers needed abilities usually taught in agricultural education and trades and industrial education followed by distributive education, office occupations, and home economics in that order. Substantial numbers of workers required skills and abilities taught in each of the vocational education programs.

CEPICA, MARVIN J. The Occupational Status and Educational Needs of Animal Husbandry Graduates of Texas Technological College. Thesis, M.S., Texas Technological College, 77 p. Library, Texas Technological College, Lubbock.

Purpose.-- The purposes of this study were to determine the occupational status of animal husbandry graduates; to determine the relationship between occupation and income from job; to evaluate college courses taken; to determine possible areas of emphasis which may be stressed in order to fulfill the needs of graduates; and to obtain information which might be of value to student advisors and counselors.

Method.--The data used in this study was secured from files in the office of the Dean of Agriculture and from completed questionnaires returned by 242 animal husbandry graduates. The study included graduates from a nine year period between 1958 and 1966. Response to the study included 78.9 percent of the graduates whose addresses were available.

Findings.--At the time this study was conducted, 12.4 percent (30) of the graduates were farm and ranch supervisors, 25.6 percent (62) of the graduates were farm and ranch operators, 9.9 percent (24) of the graduates were in "other animal husbandry" occupations, and 24.0 percent (58) were in "other agricultural" occupations. Fourteen and five-tenths percent (35) of the graduates were in non-agricultural occupations, 9.1 percent (22) were students, and 4.5 percent (11) were in military service.

The graduates were asked to evaluate the courses which they had taken at Texas Technological College. Each course was evaluated on the basis of its value to the graduates in their respective occupations. The animal husbandry curriculum was divided into three major headings. These divisions were classified as animal husbandry courses, other agricultural courses, and non-agricultural courses.

The seven most highly rated animal husbandry courses were as follows: principles of feeding, animal sanitation and disease control, animal nutrition, anatomy of farm animals, physiology of farm animals, endocrinology, and animal breeding.

Eighteen courses were evaluated which were offered in the school of agriculture but were not taught through the animal husbandry department. The five courses receiving highest ratings were as follows: fundamental principles of genetics, range plants, livestock marketing, range and range economics, and principles of marketing agricultural products.

The four non-agricultural courses receiving the highest ratings were technical writing, speech, college rhetoric, and introductory organic chemistry.

When asked for suggestions for improvement of the animal husbandry curriculum, 97 graduates (40.1 percent) indicated their need for more instruction in some phase of business. The frequency of other suggestions was not nearly so high; however, some of the other areas suggested were feeding and care of livestock, economics, range management, speech, math, veterinary science, tax laws, and more practical experience in conjunction with the courses they had completed at Texas Technological College.

CLEMMONS, JESSE STEWART. A Comparison of Student Competency in Two High School Auto Mechanics Programs. Masters Study, 1968, Department of Agricultural Education, North Carolina State University, Raleigh, North Carolina.

Purpose.-- This study dealt with the nongraded vocational education program at Brevard Junior College, Cocoa, Florida. The purpose of this study was to compare student gains in the experimental programs and selected control groups.

Method.--A pretest-posttest design, described by Stanley and Campbell as design #10 was used. An auto mechanics test was developed specifically for the project through the use of an item analysis technique. An analysis of covariance was used to analyze differences between groups.

Findings.--(1) There was a significant difference in student competency scores favoring the traditional graded organization structure over the experimental program. (2) There was a significant interaction between achievement level and organizational structure.

COILE, DAVID N. and JENSEN, ARTHUR K. Summary of Vocational Agricultural Facility Standards in Twenty-Seven States. Master's Study, 1968, Clemson University. 11 p. Department of Agricultural Education, Clemson, South Carolina.

Purpose.--The purpose of the study was to determine what type of facility standards for vocational agriculture existed in the United States. The summarized results were to be used to assist in the development of facility standards for the state of South Carolina.

Method.--A letter was sent to all state supervisors of vocational agriculture and the head teacher educators of all of the states, except Alaska and Hawaii. They were requested to forward information regarding standards for physical facilities for departments of vocational agriculture to the researchers. Replies were received from forty-three of the states, with sixteen of these not having any written standards which they could forward. Standards ranged from a single page type of standard with a few general statements concerning facilities needed to complete bulletins consisting of detailed standards, recommendations and drawings.

Findings.--The standards received by the researchers were carefully analyzed and the data recorded in tabular form. The resulting material was prepared into a series of forty-one tables, summarizing various aspects of facilities and equipment needed for the instructional phases of a vocational agricultural program. An interpretation of the tabular data was not made.

CORNING, BILL B. Machinery costs on 20 Irrigated Farms in Harmon County. Report, M.S., 1968, Oklahoma State University, 69 p. Department of Agricultural Education, Oklahoma State University, Stillwater.

Purpose.--Objectives of the study were to determine differences in net profit in farming when the investment in farming per acre varies greatly.

Method.--Personal interviews with a questionnaire were made on 20 farms, which included about 50 percent of the irrigated farms in the Gould School District. The criteria used to select farms surveyed included: (1) Farms with irrigated systems; (2) Farms with at least 10 percent of cultivated acres under irrigation; (3) The farm operator is considered to be a successful farmer; (4) Must have irrigated at least two years.

Findings.--This study revealed that as farm size increased the machinery investment increased, and as a result the net profit increased. As capital became available for the farm to expand there was a definite increase in the investment of machinery. The study revealed the average net profit was increased 43 percent due to increased yields through irrigation.

COUVILLION, WARREN CARL, SR. Education Levels and Competencies Needed to Fill Existing Jobs in Louisiana Farm Machinery Sales and Service Occupations. Thesis, M.S., 1967, Louisiana State University, Baton Rouge.

Purpose.--The purpose of this study was to identify the educational level and competencies employees needed for job entry in Farm Machinery Sales and Service occupations in rural and semi-urban areas of Louisiana.

Method.--The research utilized the descriptive method.

Findings.--There were 1,371 workers needing agricultural training in Farm Machinery Sales and Service occupations in 103 job titles.

Employers indicated a desire for their workers to possess competency in animal science only for jobs indicative of the top position in the firm, at the managerial level of employment, and the job title Salesman. Greater proficiency in plant science than in animal science was desired for employees. Participants in the study disclosed that it was necessary for the employees to have been trained in both the agricultural business management and marketing, and the agricultural mechanics and automation areas.

Educational backgrounds demanded of employees for job entry into the family Farm Machinery Sales and Services were as follows:

(1) High school graduates, 50.9 per cent, (2) Post high school technical education, 18.9 percent, (3) Some college 15.9 per cent, (4) College degree (B.S.), 9.2 per cent, (5) Less college than high school, 4.0 per cent, (6) No preference, 1.0 per cent, and College degree (M.S.), 0.1 per cent.

A high school education was satisfactory for job entry for 75.0, 70.1, and 66.4 per cent of the employees at the Semiskilled, Supervisory, and Skilled levels of employment respectively. Therefore, the high school agriculture program would be able to provide the basic agricultural competencies desired by these employers.

DEWITT, GENE. An Analysis of the Effectiveness of the Use of a Preliminary draft of a Reference Text on Small Engines as Taught in Six Vocational Agriculture Departments. Report, M.S., 1968, Oklahoma State University, 44 p. Department of Agricultural Education, Oklahoma State University, Stillwater.

Purpose.--The purpose of this study was to find out the usefulness and effectiveness of a textbook preliminary draft, used by six different vocational agriculture departments.

Method.--A questionnaire was distributed to the six different vocational agriculture instructors after they had taught from the textbook. A total of six instructors and eighty-three students participated in the study.

Findings.--It was found that (1) Most of the instructors had had some experience with small engines before teaching from the test. (2) The book added to the clarity of the discussion. (3) All six agreed there should be changes in the book. One felt color would help. Another felt the book should identify the particular engine in an illustration. (4) Most instructors agreed the textbook reduced the required time to prepare lesson plans. (5) All instructors agreed their students learned faster by using the textbook. (6) All were in agreement that both filmstrips and overhead transparencies used parallel with the textbook would have helped.

DOBBINS, LOY H. Educational and Occupational Aspirations and Expectations of High School Senior Boys in Five Louisiana Parishes. Dissertation, 1968, Louisiana State University, 192 p. Department of Vocational Agricultural Education, Louisiana State University, Baton Rouge.

Purpose.--The primary concern of this study was to provide educators with insights into the educational and occupational aspirations and expectations of high school male seniors in five Louisiana Parishes. It was also concerned with analyzing the differences between educational and occupational aspirations and expectations.

Method.--The Descriptive Survey Method using the Group Interview Technique was the method of research used. Data were collected by the use of a multiple choice inventory form designed to determine the educational and occupational aspirations and expectations of 492 male seniors of five Louisiana Parishes. This inventory schedule was administered in twenty-five public high schools during March and April of 1968.

The survey area was geographically located in the south-central Louisiana area, within twenty to sixty miles of the Baton Rouge-New Orleans industrial complex. The statistical procedures involved were frequency and percentage distributions, frequency count by cell blocks, the chi-square test of significance, and the contingency coefficient. The contingency coefficient values were computed from the chi-square value.

Findings.--A statistically significant relationship exists between the educational aspirations and expectations. The aspired educational levels, for the highest levels, were generally higher than expected choices.

Over two-thirds of the senior boys expected to achieve education beyond the high school level. Students from parents of high prestigious occupations aspired and expected high levels of education.

Occupational expectations are not statistically related to the students' knowledge of the world of work. Slightly over 50.0 per cent of the students discussed career and course choices with the counselor and teachers. The results of these discussions were not significantly different from those students who did not have conferences.

Over 44.0 per cent of the students aspired to the professional level; whereas, only 23.2 per cent expected to attain this level. The aspired and expected skilled levels were nearly equal. Approximately 8.0 per cent aspired to clerical, sales, or technical workers; only 6.0 expected to attain this level.

Over 9.0 per cent of the respondents were uncertain of their educational aspirations while 7.0 per cent were not sure of their educational expectations. Occupational aspirations and expectations were uncertain by 11.7 per cent and 31.9 per cent of the senior boys, respectively.

The immediate family, as a group, had the greatest influence on the students' expected and aspired educational and occupational choices. The friend was ranked next as the most influential person on educational and occupational plans.

Students' occupational choices were based primarily upon personal interests, satisfaction, wages, and working conditions.

Over three-fourths of the students indicated that lack of interest, ability and finances were the three most important deterring factors to the desired educational goals.

The participation in extra-curricular activities and exertion of leadership qualities influenced the aspired educational and occupational plans.

The primary sources of financial assistance to continue education and entry into occupations were the parents and work.

The high school academic average is one of the best indices for the prediction of aspired and expected education.

Approximately 70.0 per cent of the senior boys made their occupational choices in the eleventh and twelfth grades.

EADDY, VANIK S. The Influence of Selected Factors on the Vocational Choices of Vocational Agricultural Students in Louisiana. Dissertation, 1968, Louisiana State University, 163 p. Department of Vocational Agricultural Education, Louisiana State University, Baton Rouge.

Purpose.--The purposes of this study were (1) to determine the status of educational and occupational aspirations and expectations, (2) to show the influence of selected factors on career choices, (3) To identify persons influencing vocational choice, and (4) to define limitations deterring attainment of career aspirations.

Method.--The Descriptive Survey Method, with the Group Interview Technique was used in this study. Participants in the investigation were primarily males, but seven percent were females. Racial distinctions were not made; however, five schools included had a predominantly Negro enrollment.

The survey area was located in south-central Louisiana, and further limited within a radius of 60 miles from the Baton Rouge--New Orleans industrial complex. Data were obtained from 741 vocational agricultural students in 17 public secondary schools within five parishes. Surveys were taken during March and April, 1968, through cooperation with the respective school systems.

Statistical procedures were number and percent distribution, chi-square test of significance, and coefficient of contingency. Equal probability of response was assumed in each category within variables statistically related. The null hypothesis was applied to each test of significance, and was accepted or rejected at the 0.05 level of confidence.

Findings.--A high degree of association exists between the educational aspirations and expectations. The aspired educational levels were generally higher than expected choices.

Approximately one-half of the students expected to achieve greater than a high school education. Increased awareness of higher education was developed by students as they progressed through high school.

A moderate relationship exists between occupational aspirations and expectations. The aspired status was generally higher than expected prestige. Students tended to aspire and expect higher status occupations in greater magnitude as they progressed through high school. Many students lacked scholastic aptitude for attaining the educational requirements of their chosen occupations.

Thirteen and four-tenths percent and 15.1 percent of the participants were undecided about their educational aspirations and expectations. Occupational aspirations and expectations were not established by 20.6 percent and 41.4 percent of the students, respectively.

Occupational expectations are not statistically related to student awareness of the requirements of chosen careers. A majority of students were uninformed of conditions in the work world. Vocational choices are not significantly influenced by discussion of course choices and career plans with guidance counselors or teachers.

Fathers generally attained a higher occupational status, but achieved a lower educational level than mothers. Fathers were more influential in occupational choices, but mothers exerted a greater influence on student educational decisions. Parental educational status was more closely associated with student vocational choice levels than occupational prestige of the parents.

The subjects considered most influential in student vocational choices were vocational agriculture and physical education. Other subjects influencing career choices in descending order of importance were mathematics, science, English, and history. Participation in extra-curricular activities is significantly related to educational choices and occupational aspirations, but not for occupational expectations.

Reference groups of persons influencing vocational choices were ranked as follows: parents; a heterogeneous grouping of friends, persons in chosen occupations, and relatives other than parents; school personnel; and clergymen. The relative ranking of reference groups remained constant, but variations occurred within each group, when comparing persons influencing educational and occupational choices.

Student occupational choices were based primarily upon personal interests, satisfactions, and rewards. A smaller percentage of students were influenced by work experiences, capabilities, or tangible assets. High school academic achievement records are significantly related to student vocational choice levels.

Attainment of vocational aspirations was primarily limited by lack of interest, ability, and financial support.

The primary sources of financial aid for continued education and occupational entry were parents and work.

FINNEY, EDWARD NICHOLAS. A Suggested Program of Ornamental Horticulture for the Pocahontas High School. Thesis, M.S., 1968, Virginia State College. 48 p. Library, Virginia State College, Petersburg.

Purpose.--To study selected aspects of the option in Ornamental Horticulture and to develop a course outline for use at the Pocahontas High School.

Method.--The writer reviewed materials which has been published concerning proposed curricular changes in the secondary schools where vocational agriculture was offered. A thorough study was made of the materials which had been prepared by the Center for Research and Development in Vocational and Technical Education at the Ohio State University. Specific emphasis was placed on the availability of information which might suggest an appropriate design for the course at the writer's school.

Findings.--(1) Current offerings in vocational agriculture were based largely on tradition. (2) Existing facilities promoted only traditional agriculture. (3) Opportunities for extended participation in production agriculture did not exist. (4) Plans for the additional courses in vocational education were not in the immediate proposals. (5) The 1963 National Vocational Act stipulated that a definite training objective be established for each enrollee. (6) The need for ascertaining job opportunities was in evidence.

FORREST, LEWIS CONRAD, JR. A Comparative Analysis of Consensus on Role Expectations Held for Vocational Agriculture teachers and Non-Vocational Teachers. Masters Study, 1968, Department of Agricultural Education, North Carolina State University, Raleigh, North Carolina.

Purpose.--The purposes of this study were (1) to assemble a partial picture of the role of the vocational agriculture teacher, (2) to compare the role of the vocational agriculture teacher and the non-vocational teacher, and (3) to identify activity areas

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Purpose.--The purposes of this study were (1) to assemble a partial picture of the role of the vocational agriculture teacher, (2) to compare the role of the vocational agriculture teacher and the non-vocational teacher, and (3) to identify activity areas in which there appears to be role consensus for the vocational agriculture teacher and for the non-vocational teacher.

Method.--The personal interview technique, using a schedule was employed in gathering information concerning roles. The role definers in this study were incumbents of the North Carolina high school positions of vocational agriculture teacher and principal.

Findings.--The findings indicate that there is a great deal of agreement between vocational agriculture teachers and principals as to the role of vocational agriculture teachers and non-vocational teachers. Furthermore, there is a great deal of agreement between the expectations held for the two focal positions. The present research indicates that as a school teacher the vocational agriculture teacher is expected to engage in many of the same behaviors as non-vocational teachers.

The findings reported in this study should be beneficial to teacher trainers in agricultural education in structuring pre-service and in-service programs for vocational agriculture teachers. The study should also be of some value as an example of how role theory can be used in studying characteristics of positions in social systems.

GAYLORD, ONWARD JAMES, JR. The Teacher of Vocational Education as an Adopter of New Practices. Master's Study, 1968, Department of Agricultural Education, North Carolina State University, Raleigh, North Carolina.

Purpose.--The purposes of this study were (1) to determine how vocational agriculture teachers are distributed with respect to five adopter categories, and (2) to identify the types of information sources which influence adoption of educational practices by teachers of different vocational specialties, by teachers in different adopter categories, and by teachers at various stages of adoption.

Method.--The vocational education teachers in this study were selected from the high school programs of vocational agriculture, vocational home economics, distributive education, and trade and

industrial education in the southeastern states of Arkansas, Mississippi, South Carolina, and Tennessee. All four groups of respondents indicated their degree of innovativeness with respect to ten selected educational practices. The four groups also indicated the differential influence of information sources on their decisions to adopt or not adopt four of these selected practices.

Findings.--The findings indicate that there are significant differences among the proportions of teachers in each of the four adopter categories in regard to the use of impersonal and personal sources of information, but generally speaking, significant differences did not exist among the proportions of teachers in each of the four adopter categories in regard to the use of nonlocal and local sources of information. Impersonal and nonlocal sources exerted more influence on the teachers than did personal and local sources in all four adopter categories. The findings also indicate that the most innovative teachers tend to read more professional publications and attend more professional meetings than do the other adopter categories. The present research generally indicates that differences in the proportions of teachers in each of the five adoption stages do exist in regard to the use of impersonal and personal sources and nonlocal and local sources of information. In most cases, significant differences also exist among the proportions of different types of vocational teachers in each of the five adoption stages in regard to the use of impersonal and personal and nonlocal and local sources of information.

GIROUARD, LOUIS C. An Instrument for Evaluating Vocational Education in Agriculture. Master's Thesis, University of South-Western Louisiana, Department of Vocational Agricultural Education, University of Southwestern Louisiana.

Purpose.--The main problem involved the construction of an instrument for evaluating vocational agricultural education in high school.

Method.--An opinionnaire consisting of thirty-two criteria and two hundred seventeen indicators was sent to thirty-five vocational agricultural teachers and supervisors who had ten years of teaching experience or more. The criteria and indicators developed were based on three levels of importance; essential, doubtful and not needed. A majority of the respondents had to check an item in order for it to be considered essential, doubtful, and not needed as an evaluation instrument.

In final form the evaluation instrument was divided into eleven sections, each preceded by a proposition of basic philosophy concerning desired outcomes and activities in vocational agriculture. For each sub-section of the eleven sections, one evaluative criterion was developed. Indicators were then used as evidence of the extent to which each individual criterion was

being met in the vocational agriculture department and its program.

The evaluation instrument has three columns for considering the parts of the program pertaining to various criteria and indicators. In assigning the choice of merit to be inserted in the columns, the terms outstanding, satisfactory, and needs improvement were used to make the evaluation.

Findings.--Thirty-two criteria were declared essential by the majority of the respondents with a range of 88.57 to 98.21 per cent, as compared to 1.79 to 10.00 per cent doubtful, and zero to 1.78 per cent not needed.

The two hundred seventeen indicators were essentially recommended by the respondents with a range of 84.72 to 96.13 per cent, as compared to 3.87 to 13.97 per cent doubtful, and zero to 4.88 per cent not needed.

GOFORTH, ARLIE GUY. A Comparative Management Study of Registered and Commercial Swine Breeding Herds in Grant County, Oklahoma, with Implications for Teaching Secondary Vocational Agriculture. Report, M. S., 1968, Oklahoma State University, 48 p. Department of Agricultural Education, Oklahoma State University, Stillwater.

Purpose.--The purpose of this study was to determine if there were any appreciable differences in the management and business practices used by registered and commercial swine breeders in Grant County, Oklahoma. Such information should provide a basis of instruction in vocational agriculture and adult classes which could lead to an increase in the efficiency of swine breeding herds in the county.

Method.--A questionnaire was distributed to all registered swine breeders and commercial swine breeders who had ten sows or more during the year of 1967. A total of 78 swine breeders were included in the study.

Findings.--(1) Registered swine breeders are more concerned about the health, housing, and the diseases of their swine herds than the commercial swine breeders. (2) Commercial breeders seem to be more concerned about the cost of production of the swine herd than the registered swine breeders. (3) In this county, commercial swine breeders are older than the registered swine breeders. They have more farming experience and have been in the swine business longer than the registered breeders. (4) On the average, commercial breeders have fewer number of sows per breeder, farrow a larger number of pigs and market a smaller number of pigs at an older age than the registered swine breeder. (5) The differences suggest that registered swine breeders use more advanced management practices than those used by commercial swine breeders.

HARRISON, JOHN JR. An Appraisal of the Value of Experiences in Vocational Agricultural Mechanics by Students Enrolled in Selected Curricula at Oklahoma State Tech. Report, M.S., 1968, Oklahoma State University, 26 p. Department of Agricultural Education, Oklahoma State University, Stillwater.

Purpose.--The purpose of the study was to find out if certain skills taught in vocational agriculture mechanics were of value to students pursuing selected curricula at Oklahoma State Tech.

Method.--The population included only students having had one or more years of vocational agriculture mechanics in high school. Information was obtained by questionnaire administered by the investigator to students enrolled in their last two trimesters of study in diesel mechanics, auto mechanics, and refrigeration and air conditioning at Oklahoma State Tech.

Findings.-- It was found that: (1) skill experiences obtained in high school were often somewhat limited; (2) parent's occupation influenced student's choice of curricula only slightly; (3) mechanics skills gained in high school were useful to the students in technical courses they were pursuing; (4) students rated skills of less value when they had limited or no experience; (5) both students and instructors were convinced that most skills taught in agricultural mechanics could be of value to students pursuing certain mechanics courses at Oklahoma State Tech.

HASH, J. ALEX. Construction and Standardization of a Forestry Achievement Test. Staff Study, 1968, Clemson University. 35 p. Department of Agricultural Education, Clemson, South Carolina.

Purpose.--To construct a multiple-choice, standardized achievement test in forestry education for the secondary school.

Method.--A panel of four subject matter specialists were utilized in identifying eight major content areas in forestry, preparing a subject outline, and determining the total percentage of test items that should come from each major content area. Another panel of three educational measurement specialists were utilized in completing a table of specifications by determining the percentage of test items within each content area that should measure: (1) vocabulary and factual recall, (2) understanding and generalizations, and (3) application and problem solving. Using the table of specifications as a guide, 200 multiple-choice test items were constructed by the investigator and reviewed by the subject matter specialists for clarity and accuracy.

After a preliminary tryout for perfecting directions, establishing procedures, and estimating difficulty level, the 200 items were assembled in order of difficulty (easy to hard) and admin-

istered to 500 students in grades 9 through 12 during two 55-minute periods on consecutive days. Twenty-nine South Carolina high schools (10 per cent of those offering vocational agriculture) and twenty counties (44 per cent) from the Piedmont to the Coastal Plain were sampled in the study. The schools selected met ten criteria established in advance; namely, the teachers were interested in forestry, had good forestry programs, and taught the subject systematically. Predominantly Caucasian and Negroid schools were selected in the same proportion as they exist in the State.

One hundred items for the final test form were selected on the bases of item analysis statistics, cross-validation, and content validity considerations. Tentative norms for grades 9, 10, 11, and 12 were prepared in the form of percentile ranks and T-scores.

Findings.--(1) The 100 test items selected for the final form were distributed throughout the table of specifications very closely to the recommendations of the two panels of experts. It is on this evidence along with the judgment of the investigator that content validity for this test is based. (2) The reliability coefficient of the final form calculated by Kuder-Richardson formula 20 on the cross-validation sample was .88; the standard error of measurement was 4.47. (3) Point biserial correlations (discrimination indices) of all items selected for the final form except two were significant at the .05 level by t-test. Content validity considerations dictated that the latter two items be retained for the final form. (4) The standard errors of the mean calculated for the tentative norm groups ranged from .94 for the eleventh grade (n=166) to 1.54 for both the twelfth grade (n=106) and ninth grade (n=94) with 1.31 for the tenth grade (n=92).

HOWELL, TED JAMES. Teaching Basic Electricity in Vocational Agriculture. Report, M. S., 1968, Oklahoma State University, 53 p. Department of Agricultural Education, Oklahoma State University, Stillwater.

Purpose.--The purposes of this study was to promote the teaching of electricity to vocational agriculture students. Secondary objectives were to aid teachers in making lesson plans and to determine if a given group of agriculture teachers who had not previously taught wiring could teach electricity effectively.

Method.--A county group of agriculture teachers was selected and their students were given pre-tests and post-tests and their results were compared. The teachers were given a series of weekly meetings for instruction on the lesson plans and to become acquainted with the materials and references needed.

Findings.--It has been found that electricity can be taught using similar units. It is recommended that workshops be conducted

for teachers interested in units on electricity. At least twenty periods should be devoted to the subject.

It is the conclusion of the writer that each vocational agriculture teacher can teach some electricity. The material and tools are readily available and are relatively inexpensive. Extensive facilities are not required.

HUDSON, JAMES ARTHUR. A Study of Certain Aspects of the Student Teaching Program in Vocational Agriculture in Several Land-Grant Colleges and Universities. Thesis, M. S., 1968, Virginia State College, 55 p. Library, Virginia State College, Petersburg.

Purpose.--To determine certain policies and procedures which were characteristic of the programs of the institutions that conducted student teaching programs in agricultural education.

Method.--Information was secured from a questionnaire which was prepared and mailed to each respondent. The replies were in terms of the prevailing conditions and no respondent was asked to justify an answer.

Findings.--A summary of the findings follows: (1) The number of student teaching centers used by forty-seven of the reporting institutions did not exceed fifteen centers per institution, and each of the 578 centers in a radius of 150 miles of the parent institution. (2) The supervising teacher was required to possess the M. S. degree by thirty-three of the respondents, while advanced training, not an advanced degree, beyond the baccalaureate level was required by twenty-seven institutions. In addition, from one to six years of teaching experience was stipulated by sixty-one colleges and universities. (3) Twenty-seven institutions reported that the head of the department of agricultural education was responsible for securing permission to use the student teaching centers. (4) The student teaching programs were operated during the first and second semesters by twenty-three of the respondents, with periods of nine weeks for each student reported in sixteen instances. (5) Thirty-three institutions indicated that as many as thirty-six hours were devoted to becoming familiar with the organization of the department of vocational agriculture by each student teacher, and forty-two institutions required thirty-six hours of observation on an individual basis. (6) More than 200 hours of teaching high school students were required by each of thirty-one of the respondents. (7) In terms of the out-of-school program, reports of no participation in teaching young farmers were made by eleven institutions, and nine of the respondents made similar reports. (8) Thirty-two of the colleges and universities required from one to ten hours in teaching young farmers, and reports from thirty-one institutions stipulated from one to five

hours in teaching adult farmers. (9) Twenty-eight of the respondents required from one to twenty hours of on-farm instruction, while eleven institutions did not list participation in this area as a requirement. (10) Formal application for admission to the teacher-education curriculum was listed in fifty-three instances. (11) In terms of the number of semester hours required for graduation, there were forty-eight reports in the 126 to 140 hour range, with eighteen of these reports in the 126-130 hour category. (12) Fifty-four of the institutions required from eleven to twenty semester hours of agricultural education, with the requirements for twenty institutions in the range of from fifteen to eighteen semester hours. (13) Observations in local high schools, prior to the period of student teaching, were required by forty-five per cent of the respondents, and seminars were stipulated in twenty-three cases. (14) Sixty-two institutions assigned from one to two students to each of the respective student teachers. (15) The extent of participation by the supervising teacher in arriving at the student teacher's final grade was listed as very great by forty-two of the respondents, along with similar reports of very great in forty-four instances in favor of the teacher-educator. Only in nine cases were evaluations by the high school principal required. (16) Forty-seven institutions reimbursed the supervising teacher. (17) Thirty-one respondents did not relieve the teacher-educator of his assignments on the campus during the period of student teaching as compared with thirty reports of complete relief being given. (18) Fifty-six colleges and universities did not have campus laboratory schools. (19) The development of the student teaching manual was the responsibility of the department of agricultural education in forty-eight institutions.

HUNTER, MIKE. A Study of Previously taken Courses in Agricultural Mechanics by Oklahoma College Transfer Students Majoring in Agricultural Education. Report, M. S., 1968, Oklahoma State University, 65 p. Department of Agricultural Education, Oklahoma State University, Stillwater.

Purpose.--The purpose of this study was to determine the degree of articulation that existed between other Oklahoma state supported colleges and Oklahoma State University as well as to determine students' awareness of the requirements for a degree in agricultural education.

Method.--A questionnaire was distributed to all students majoring in agricultural education who had transferred to Oklahoma State University from other colleges in Oklahoma. A total of 109 students participated in the study.

Findings.--It was found that: (1) Fifteen state supported colleges had students who transferred to Oklahoma State University.

hundred and nine student responses revealed that 74 percent had definitely decided to major in agricultural education prior to their enrolling at Oklahoma State University. (3) Fifty-six percent indicated they were unaware of the agricultural mechanics requirements, and 76 percent expressed interest in taking general education courses prior to enrolling at Oklahoma State University. (4) The primary reason for students failure to enroll in pre-requisite courses at these colleges was lack of awareness of the need for these courses.

JACKS, LLOYD PALMER. Development and Use of Subject Matter Material for Vocational Education in Agriculture. Dissertation, 1967. Mississippi State University, 184 p., Department of Vocational Agricultural Education, Mississippi State University, Starkville.

Purpose.--The intent of this research was to obtain and interpret data for the purpose of determining how Mississippi teachers of Vocational Agriculture could be rendered more effective aid by the Subject Matter Service in the Department of Agricultural Education at Mississippi State University.

Method.--The research utilized the descriptive method. Data were obtained on a validated, pre-tested schedule through group interviews with a population of 276 experienced teachers.

Findings.--Teachers rated the Subject Matter Service as their most important source of instructional materials. Next in importance was the Agricultural Experiment Station. Teachers indicated they had too few copies of all references to meet class needs. The mean quantity for all references was one copy for each two students.

"Readability" of the publications apparently did not influence differences in extent-of-use of the materials. Instructors utilized too few agricultural magazines, state and federal publications, and similar supplemental materials in their instructional programs.

Teachers indicated their greatest need for new references in these instructional areas: (1) pastures; (2) basic economic principles in farm management; (3) basic economic principles in agribusiness; (4) agricultural mechanics; (5) career opportunities in production farming, agricultural service, farm machinery sales and service, farm supplies and equipment, and ornamental horticulture; (6) steps and procedures to organize an agribusiness; (7) financing and managing agribusinesses; (8) nature and operations of feed and farm supply stores, and of farm implement dealerships; and (9) controlling weeds in pastures, and in cotton.

The five most preferred supplementary teaching aids, in order of preference, were: (1) Illustrated information sheets, job operation sheets, and the like; (2) projection transparencies; (3) 16mm films; (4) wall charts; and (5) 35mm filmstrips.

Teachers agreed that only four groups should be represented on a subject matter planning committee: Department of Agricultural Education staffs; teachers of vocational agriculture; state supervisory staff; and specialists from technical subject matter fields.

Teachers also agreed that: (1) reference manuscripts should be reviewed during development by specialists in technical subject matter fields to assure adequate and accurate coverage of information; and (2) they needed assistance to help them more effectively interpret and use new teaching materials. They were "undecided" on the need for establishing a policy to promote retention of major reference materials in departmental libraries.

JENSEN, ARTHUR K. Improving Procedures for Producing Overhead Transparencies With the Ultimate Aim of Incorporating These Techniques Into the Development of a Regional Curricular Materials Center for Vocational Education. Staff Study, 1967, Clemson University. 25 p. Vocational Education Media Center, Clemson, South Carolina.

Purpose.--The purpose of the study was to develop a low cost overhead transparency and to investigate the potential of a plan for the subsequent development of a southern regional curricular materials development laboratory.

Method.--The offset press has long been recognized as an economical and effective machine for the reproduction of printed and pictorial educational materials. This machine was selected as the basic tool for the reproduction of overhead transparencies. Special printing procedures, special inks and special techniques were developed to successfully enable the researcher to produce an effective, low cost overhead transparency. The transparency was printed on a material known as Trycite. This material, though not as durable as most of the materials used by competitive overhead transparency processes, is sufficiently durable to withstand the use given it in an ordinary classroom. In order to develop the overhead transparency printing procedures, the researcher concentrated on the development of a set of overhead transparencies on the basic principles of power transmission in agricultural machinery. These transparencies were printed in four colors. After printing, the set of eighty-eight transparencies were distributed to selected teachers of vocational agriculture in five southern states and evaluated by these teachers.

Findings.---(1) It is possible to produce by a mass production approach an effective and economical overhead transparency. Material costs for transparencies reproduced by this approach, when produced in quantities of three hundred or more copies each, have averaged less than four cents for single color transparencies and less than ten cents for four colored transparencies. This did not include overhead or depreciation on equipment. (2) The transparencies reproduced were accepted by the teachers of vocational agriculture in the southern region. Thirty-three of the thirty-nine teachers evaluating this project rated the transparencies as very effective. The qualities of the transparencies developed were rated as satisfactory by a tremendous majority of the teachers. (3) The teachers were in accord, by a very large majority of opinion, that the production techniques which had been developed to lower the cost of these transparencies were acceptable. (4) Only three of the thirty-nine teachers found production defects that would be objectionable. (5) Approximately three of the four teachers evaluating the project agreed that the techniques and tools included in the transparency production process were of value to them. (6) All of the teachers agreed there was a great need for materials of this nature and that this transparency project should be continued. (7) About one-half of the teachers felt the production of transparencies should be on the state basis. Approximately one-fourth felt that it should be on the southern regional basis and the other one-fourth felt it should be worked out between the state and the southern region.

JUSTICE, RONALD GENE. Motives for Student Affiliation or Disaffiliation with Collegiate FFA as Reported by Students Enrolled in Agricultural Education. Report, M. S., 1968, Oklahoma State University, 64 p. Department of Agricultural Education, Oklahoma State University, Stillwater.

Purpose.---The purpose of this study was to determine how the Collegiate FFA might function more effectively to serve the needs of students at Oklahoma State University. Such information should aid the faculty in advising the Collegiate FFA and aid officers in planning and carrying out their responsibilities.

Method.---A questionnaire was distributed to all students on the Oklahoma State University campus presently holding membership in the organization, enrolled in AGED classes or indicating a major in AGED. A total of 130 students participated in the study.

Findings.---It was found that: (1) The Collegiate FFA is of prime benefit to the prospective vocational agriculture instructor. (2) The meetings are not adequately publicized. (3) The pledge duties lack appropriateness and meaningfulness. (4) The members would prefer that the Collegiate FFA work more closely with the high school FFA chapters. (5) The meetings seem to be lacking in interest. (6) The members think the chapter should plan more

closely with the high school FFA chapters. (5) The meetings seem to be lacking in interest. (6) The members think the chapter should plan more educational activities. (7) The members suggest more activities which would allow larger group participation. (8) The members welcome the active membership of the graduate students.

KIRKLEY, F. E. Teaching the Importance of Agriculture with Agricultural Facts. Staff Study, 1968, Clemson University. 109 p. Department of Agricultural Education and Vocational Education Media Center, Clemson, South Carolina.

Purpose.--The purpose of this study was to assemble the needed factual information for teaching the importance of agriculture in South Carolina. This material is structured to be appropriate for any of the agricultural instructional groups.

Method.--Most of the material was procured from the 1964 Census of Agriculture and from the South Carolina Crop Reporting Service. The United States Census Reports on employment were also used.

Findings.--This material, in lesson form, emphasizes the following facts relative to South Carolina's agriculture: (1) The public's present attitude toward agriculture is based on: (a) Crop-average trends, (b) changes in agriculture, (c) trends in population, and (d) employment. (2) The true picture of agriculture is determined by: (a) trends in production, (b) cash receipts, (c) employment, and (d) size of agri-business. (3) There is much misunderstanding of our present agriculture. (4) Projected needs point to an expanded agriculture in South Carolina. (5) The true picture of agriculture should be studied on a county, state and national basis.

LEWIS, WILLIAM J. A Study of Adult Education Needs as Perceived by Lincoln County Part-Time Farmers. Report, M. S., 1968, Oklahoma State University, 61 p. Department of Agricultural Education, Oklahoma State University, Stillwater.

Purpose.--The purpose of the study was to determine the needs of part-time farmers in Lincoln County for education in agriculture. This was needed in order to develop a comprehensive program for adult education in agriculture to meet the needs of those employed in agriculture related jobs.

Method.--Questionnaires were distributed to 135 part-time farmers in Lincoln County. These were drawn from lists compiled by the nine vocational agriculture instructors in the county. The study was based on the first one hundred questionnaires completed and returned.

Findings.--(1) The part-time farmers have sufficient investment in land, machinery, and livestock for them to be a stable segment of the population in Lincoln County for many years. (2) Three-fourths of the farmers were interested in attending adult classes in agriculture. (3) Over fifty percent of the farmers had not previously attended adult classes. (4) Thirty-two percent of the part-time farmers responding worked at agriculture related jobs off the farm. (5) Approximately one-half of the part-time farmers employed at off-farm jobs related to agriculture needed competencies in the area of agricultural mechanics. (6) A comprehensive agriculture education program should include instruction for the benefit of those in agriculture related off-farm jobs. (7) The area of human relations was reported to be important to many of the part-time farmers in the performance of their off-farm jobs.

MAXSON, JOE MAC. A Comparison of Evaluations by Two Groups of Extension Agents of a Proposed 4-H Horticulture Member Manual. Report, M. S., 1968, Oklahoma State University, 47 p. Department of Agricultural Education, Oklahoma State University, Stillwater.

Purpose.--The purpose of the study was twofold: first, to determine possible differences and/or similarities in terms of evaluations made by two groups of county extension agents of a proposed 4-H horticulture member manual, and second, to determine what changes and further developments should be made in the manual before it was finalized and reproduced for distribution to 4-H Club members enrolling in horticulture projects.

Method.-- A questionnaire was mailed to two groups of agents that represented rural and urban areas, along with a copy of the proposed 4-H horticulture manual. Responses were tabulated and assigned values from one to five in order that a cumulative score average could be determined.

Findings.--The urban agents thought the suggested references in the manual did more to facilitate learning than did rural agents. Responses indicated that rural agents felt there was less need for a specific listing of suggested demonstration titles than did urban agents. Urban agents felt the manual needed to be more closely related to extension fact sheets and bulletins than did rural agents. Rural agents indicated they felt there was too much material of a general nature in the manual. Urban agents felt a greater need for the proposed manual than did rural agents; rural agents felt a greater need for including illustrations than did urban agents; urban agents felt a greater need for dividing the manual into age groups than did rural agents.

MCCLIMON, HUGH P. and JENSEN, ARTHUR K. A Study to Determine the Physical Facilities Needed for Vocational Agriculture. Master's Study, 1968, Clemson University. 38 p. Department of Agricultural Education, Clemson, South Carolina.

Purpose.--The purpose of the study was to determine existing facilities available to teachers of vocational agriculture in the state of South Carolina and to obtain the attitudes of these teachers towards the types of facilities they deemed necessary for an effective instructional program.

Method.--The study population included all of the vocational agricultural teachers in the state of South Carolina. Teachers were given a form to complete. This form listed the types, condition, size and construction features of facilities presently available to the teacher and requested other information applicable to both in-school and out-of-school phases of the program. The teachers were asked to give their personal opinions and recommendations for improving these facilities.

Findings.--The data collected were summarized and put into tabular form. No attempt was made to interpret the summarization of this material, but instead, ninety-one tables were prepared and made available for those involved in planning future facilities, equipment and instructional needs of South Carolina teachers of vocational agriculture.

MORTON, WILLIAM DON. School Administrators Opinions of Vocational Agriculture and Future Farmer of America Activities. Report, M. S., 1968, Oklahoma State University, 35 p. Department of Agricultural Education, Oklahoma State University, Stillwater.

Purpose.--The purpose of this study was to determine the school administrator's perception of Vocational Agriculture and the Future Farmer of America organization.

Method.--Items on the mailed questionnaire reflected the past, present, and future activities of Vocational Agriculture in public secondary schools. This study was carried out in 16 of the schools in the Muskogee P. I. District of northeast Oklahoma. Each school conducted a program of vocational agriculture.

Findings.--It was found that administrators on the whole approved of the methods by which FFA activities are carried on, as well as current practices in vocational agriculture. The number of students participating in FFA activities was appropriate. The time of scheduling FFA activities could have further consideration from all concerned as there were evident differences of opinions as to when activities should be scheduled. Students were found not to be using time in vocational agriculture and FFA activities that could be better spent in other high school subjects.

It is the conclusion of this author that agricultural mechanics and non-farm agricultural occupations should receive added emphasis.

NORRIS, MARSENA MARION. Selected Behavioral Changes of Students Attending the Southern Oklahoma Area Vocational-Technical Center During 1966-67. Dissertation. Ed.D., 1968, Oklahoma State University. 60 p. Department of Agricultural Education, Oklahoma State University, Stillwater.

Purpose.--A major objective of the study was to determine the effect of participation in the Southern Oklahoma Area Vocational-Technical Center program on student academic achievement, extent of participation in extracurricular activities and social behavior at the home high school.

Method.--The investigation was of ex post facto design, with experimental and control groups statistically compared in retrospect. The functional design included a treatment group of 229 students. All 458 students who responded to the instrument were currently enrolled in 12 southern Oklahoma high schools. All students comprising the treatment group did participate in the area center programs. The control group was a stratified random sample of students who did not participate in the area center programs.

Findings.--Analyses of data related to the three dependent variables investigated in this study did establish the proposition that students enrolled in the Southern Oklahoma Area Vocational-Technical Center are affected in their behavior at the home high schools. It was found that students who did not attend the vocational-technical center did earn significantly higher grades in academic courses at their home high schools than were earned by those students who attended the Southern Oklahoma Area Vocational-Technical Center. A significant change in the extracurricular activity participation pattern of the area center students occurred when compared with the change in the participation pattern of students not attending the vocational-technical center. Analyses of these data revealed that area center students are inclined to be more cooperative, make better use of their time in class, and exhibit better discipline in their home high schools while enrolled in the Southern Oklahoma Area Vocational-Technical Center Programs.

O'QUINN, GEORGE DONALD. A Comparison of Consensus of the Vocational Agriculture Teacher's Role. (Under the direction of Clarence Cayce Scarborough).

Purpose.--The purpose of this study was to investigate the extent of consensus of the vocational agriculture teacher's role as seen by vocational agriculture teachers, administrators, and co-workers.

Methods.--Seven roles of the vocational agriculture teacher were identified and statements concerning each role were rated by vocational agriculture teachers, administrators, and co-workers.

Findings.--In 32 of 35 comparisons made, consensus was found on the role of the vocational agriculture teacher. Only in three areas was there lack of consensus: (1) Vocational agriculture teachers with a Master's Degree saw their role as Teacher of High School Boys significantly more important than did teachers with a Baccalaureate Degree. (2) Vocational agriculture teachers saw their role as Teacher of Adults significantly more important than did either the administrators or non-vocational teachers. (3) Administrators saw the agriculture teacher's role as Member of Faculty significantly more important than did either the agriculture teachers or the non-vocational teachers.

This study revealed that there was considerable agreement between the three groups studied concerning the role of the vocational agriculture teacher.

POTTER, BENJAMIN GRAHAM. The Occupational Aspiration of Boys in Non-Comprehensive High Schools. Master's Study, 1968, Department of Agricultural Education, North Carolina State University, Raleigh.

Purpose.--To determine the occupational aspiration levels of male high school students in order to determine the relationship between curriculum tracks and specific courses.

Method.--The Haller Occupational Aspiration Scale was administered to 286 male students at Corinth-Holder, Middlesex, and Wakelon High Schools. The survey forms were tabulated by the scoring method designed by Haller. An analysis of variance was used to determine the significance of the student OAS score and the variables described in each hypothesis.

Findings.--The study indicated the difference in OAS scores of high school students enrolled in different curriculum tracks. Students in the college preparatory track had the highest level of aspirations, which shows their desire and concern about choosing a life's vocation. This implies that educational achievement is associated with occupational prestige.

The study indicated that there was no significant difference between occupational aspirations and the grade level of the high school students. Perhaps many students make their decisions before they reach the 9th grade. Regardless, we must realize that the level of aspiration represents the degree to which an individual's total background has prepared him to seek out prestige.

The OAS scores among various vocational courses offered in high-school did not show a significant difference. However, students enrolled in vocational agriculture had a higher OAS mean score. This implies that the importance of occupational information which is included in the course content of all voca-

tional agriculture courses is significant. More investigation is needed to provide additional information regarding the aspirations of students.

This study also indicated that the main source of guidance comes from the family. Students whose fathers had higher prestige occupations had a higher OAS mean score. This implies that the higher the economic status of the family, the higher the level of aspirations of the student.

ROBINSON, RANCE HENRY. A Study of Vocational Agriculture and Vocational Mechanics Programs In Seven Schools of Northeastern Oklahoma. Report, M. S., 1968, Oklahoma State University, 43 p. Department of Agricultural Education, Oklahoma State University, Stillwater.

Purpose.--A major purpose of the study was to identify differences between groups of students enrolled in the conventional vocational agriculture program and students enrolled in the vocational agriculture mechanics program. A related purpose of the study was that of identifying certain features of the vocational agricultural mechanics program as taught in seven schools in northeastern Oklahoma.

Method.--A total of 176 junior and senior students enrolled in vocational agriculture and/or vocational agricultural mechanics in Wagoner, Muskogee, and Tulsa Counties during the school year 1967-68 made up the population for the study. Responses were obtained from each vocational agriculture instructor and high school principal by use of a questionnaire administered by the investigator.

Findings.--Students receiving credit in the conventional agriculture program were found scholastically superior in (ITED) test scores and grade point averages when compared to students receiving credit in the agricultural mechanics program.

A considerably more extensive program of leadership activity participation was exhibited by those students pursuing the conventional program as compared to those students enrolled in the agricultural mechanics program.

With regard to the nature and extent of a background of farm experience, students in the conventional agricultural program far exceeded those students enrolled in agricultural mechanics program.

The percentage of students in the conventional program with parents deriving a major portion of income from farming exceeded

the percentage of those students in the vocational agriculture mechanics program whose parents also derived a major portion of income from farming.

With regard to work in the field of agriculture, the vocation of the father apparently did influence his son's occupational objective.

Occupational objective of student, organization of instruction, and course work covered in the agricultural mechanics program appeared to influence course enrollment.

RUDY, DONALD. Teaching Basic Units of Electricity in Vocational Agriculture in Northwest Oklahoma Schools. Report, M. S., 1968, Oklahoma State University, 44 p. Department of Agricultural Education, Oklahoma State University, Stillwater.

Purpose.--A major purpose of the study was to test and evaluate the effectiveness of a planned series of teaching units on applied electricity.

Method.--These teaching units were developed through joint efforts of the state department of vocational agriculture and the agricultural mechanics teacher education group at Oklahoma State University. The units were taught in eight high schools of Northwest Oklahoma. Pre-tests and post-tests were given to all students completing the units of study in each school. Teachers were also encouraged to evaluate the effectiveness of the units taught.

Findings.--Gains made by students were nearly the same regardless of whether parents were farmers or non-farmers. Noticeably higher gains were made by students living on farms with parental income from farming of less than \$3000.00 than from comparable students with parental income over \$3000.00. Generally, students ranking relatively lower on the pre-test made significant gains bringing them into approximately equal score levels with other students on the post-test.

The conclusion was reached that the units, as developed, (1) were effective in sustaining student interest, (2) were readily acceptable by teachers, and (3) were effective in assisting students to obtain basic knowledge in the area of applied electricity.

SCHROEDER, LAWRENCE MAX. A Study of the Adoption of Selected Farming Practices with Implications for Adult Farmer Education. Report, M.S., 1968, Oklahoma State University, 38 p. Department of Agricultural Education, Oklahoma State University, Stillwater.

Purpose.--The purpose of this study was to determine if the level of education had any effect on the approved farm practices that the farmers are conducting in the community.

Method.--A survey schedule was personally distributed to the 21 adult farmers in the Local School District No. 431 that were selected at random for this study. The 21 farmers were selected as ten percent of the 212 adult farmers in the community who raised wheat and grain sorghums.

Findings.--It was found that: (1) In general, the adult farmer respondents, regardless of educational attainment, had accepted the majority of approved practices to about the same degree. (2) The 'higher educated' adult farmers accepted the latest technological advances to a greater degree than the 'lower educated' adult farmer group. (3) It was found the farmers in the Local School District No. 431 compare equally to farmers in other communities where studies have been conducted. (4) It was concluded that the agriculture instructor continue an adult education class, so that the farmers can better serve society and satisfy their own needs as well as present a more favorable attitude toward the entire vocational agriculture program among the people of the community.

SHEPHERD, LENARD L. Nonfarm Employment in Thirty-Four Selected Food Processing Firms in Knoxville and Knox County, Tennessee. Thesis, M. S., 1966, University of Tennessee. 35 p. Library, University of Tennessee, Knoxville.

Purpose.--The purposes were: (1) to determine the number of nonfarm agricultural jobs in the food processing industry in Knoxville and Knox County, Tennessee, (2) to learn of educational requirements for employment, and (3) to determine the possibilities for occupational work-experience programs in these industries.

Method.--Thirty-four food processing firms were identified in Knoxville and Knox County, Tennessee. The information was collected by personal interview using a survey form developed by the Tennessee Department of Vocational Education and Employment Security.

Findings.--(1) There were 3,142 workers employed in the 34 food processing firms. (2) Nearly 2,000 of the positions required high school educated personnel. (3) Over 65 percent of all jobs were in three job levels: sales, semi-skilled and skilled personnel. (4) Job turnover was greatest among the semiskilled and unskilled. The annual over-all turnover rate averaged almost 20 percent. The expected expansion in the next five years was 10.3 percent of the total employment. (5) The majority of the

employers indicated they would participate in a work-experience program but were concerned over labor laws governing the hiring of persons under 18 years of age. (6) Employees identified most frequently "sales" and "production line" jobs as being best suited for a work-experience program.

SHERO, JOHN GORDON. Perceived Values of FFA Public Speaking Contests by Former Vocational Agriculture from the Vinita Professional Improvement Group. Report, M. S., 1968, Oklahoma State University, 46 p. Department of Agricultural Education, Oklahoma State University, Stillwater.

Purpose.--The purpose of this study was to: determine (1) whether FFA Public Speaking contests should be a part of the regular Vocational Agriculture curriculum, and (2) the importance of FFA Public Speaking contests in pursuing a career.

Method.--A questionnaire was prepared and mailed to 68 former students of the 12 schools used in the study. A matched group of students who had not participated in FFA speech contests were used as a control group. Students selected were graduating seniors from the 1960-61 and 1961-62 school years.

Findings.--It was found that: (1) A larger number of participating students than non-participating students now hold professional type jobs. (2) FFA Public Speaking contests should be a part of the regular Vocational Agriculture curriculum. (3) Participating members also entered more FFA contest and leadership activities than non-participating members. (5) More hours of class time should be devoted to FFA Public Speaking contests. (6) All students should participate in FFA Public Speaking contests.

SHILL, JAMES FRANKLIN. Educational and Occupational Aspirations, Expectations, and Abilities of Rural Male High School Seniors in Mississippi. Dissertation, 1968, Mississippi State University. 372 p. Department of Vocational Agricultural Education, Mississippi State University. Starkville.

Purpose.--The central purpose of this research was to provide vocational educators with insights into the educational and occupational aspirations, expectations, and perceived abilities of rural male high school seniors in Mississippi.

Method.--Data were obtained from 33 randomly selected high schools in Mississippi. Pre-tested questionnaires were mailed to vocational agriculture teachers who administered them to 517 respondents. Information was transferred to I.B.M. cards for electronic computation. Statistical procedures involved com-

putation. Statistical procedures involved computation of frequencies, percentage distributions, and chi square test for significance.

Findings.--Parents of seniors who had not participated in vocational agriculture training in both sizes of schools tended to place more emphasis upon formal education than did parents of seniors who had participated in such training.

Seniors in both sizes of schools without vocational agriculture training tended to make higher grades, rank higher in their classes, and set their educational objectives later than those with such training.

Respondents who had participated in vocational agriculture training in both sizes of schools tended to perceive their vocational abilities as being higher and their academic abilities as being lower than those who had not participated in such training. Seniors in large schools tended to perceive their writing, speaking, mathematical, business, and agricultural abilities as being better, and their reading, scientific, and trade and industrial abilities as being poorer than those in small schools.

In both sizes of schools respondents without vocational agriculture training tended to have higher educational aspirations and expectations than those with such training. However, seniors with vocational agriculture training tended to have educational aspirations that were more closely aligned to their expectations than those without such training. Seniors in large schools tended to have higher educational aspirations and lower expectations than those in small schools.

Seniors who participated in vocational agriculture training in small schools tended to aspire to employment in construction, government, or agriculture and tended to expect employment in construction, service and miscellaneous, or manufacturing, whereas those not participating in such training tended to aspire to employment in the service .

In both sizes of schools seniors with vocational agriculture training tended to aspire to professional, managerial, or skilled occupations and tended to expect skilled, professional, or semi-skilled occupations. Those without such training tended to aspire to professional, managerial, or skilled occupations and tended to expect professional, semi-skilled, or unskilled occupations.

It was found that seniors in both sizes of schools who participated in vocational agriculture training tended to select agriculture-related occupations more often than those who had not participated in such training.

SHIVAR, CURTIS TAPP. A Comparison of Level of Occupational Aspirations of High School Boys in Selected Curricula at Southern Wayne High School. Master's Study, 1968, Department of Agricultural Education, North Carolina State University, Raleigh.

Purpose.--The purpose of this study was to compare the occupational aspirations of vocational agriculture students with students in college preparatory, general education, and other vocational education tracts.

Method.--The occupational aspirations of 323 male students at Southern Wayne High School were studied in relation to the curriculum tract, the kind of vocational curriculum, the kind of vocational course, and the grade level of the students. The Haller Occupational Aspiration Scale (OAS) was administered to the participating students and the data were submitted to an analysis of variance. A table of critical values of "F" was used to determine the significance levels, then the data from paired groups were analyzed by means of a "t" test. This analysis determined the difference between the means of values derived from Haller scale scores for each group.

Findings.--It was determined that significant differences existed in the OAS scores of students enrolled in the three tracts of the school curriculum. College preparatory students have a higher level of occupational aspirations than vocational or general education students. In a comparison of OAS scores of students in the vocational tract, the findings yielded higher scores for students of vocational agriculture than for students enrolled in Distributive Education and students in Trades and Industrial Education. Significant differences were found in comparisons of the OAS scores and grade level, significant differences were found between 9th-grade students and students in grades 10, 11, and 12. In each comparison, the scores of 9th-grade students were significantly lower. The findings reported in this study gave evidence of the value and need for occupational information for high school students. The information should be of value to teachers of vocational agriculture in implementing and conducting programs of vocational agriculture--with emphasis on occupational information during the early high school years. The study should also be of value to guidance counselors in providing high school students with occupational information also during the early years of high school.

SIMMANS, RANDY D. The Occupational Status and Educational Needs of Park Administration, Horticulture, and Entomology Graduates of Texas Technological College. Thesis M. S. 1968, Texas Technological College 102 p. Library, Texas Technological College, Lubbock.

Purpose.-- The purposes of this study were to determine the occupational status of graduates from the Department of Park

Administration, Horticulture and Entomology at Texas Technological College, to obtain information which could be used to aid in student counseling by the park administration, horticulture, and entomology staff, and to evaluate courses the alumni completed during college.

Method.--The data for this study were secured from a follow-up questionnaire and the scholastic record of each of the graduates during a period extending from June, 1957, through June, 1967. The 190 graduates who cooperated in this study represented 78.8 percent of the total number of graduates.

Findings.--A total of 95 (50.0 percent) alumni completed one year or more of vocational agriculture in high school.

At the time of this study, 48.4 percent (92) of the graduates were in park administration related occupations, 8.4 percent (16) were in horticulture related occupations, and 5.8 percent (11) of the alumni were in entomology related occupations. Thirteen and two-tenths percent (25) of the alumni were in agricultural related occupations, 6.3 percent (12) were in the non-agriculture occupational group, 9.5 percent (18) of the graduates were in the military service, and 8.4 percent (16) of the alumni were in graduate school as full time students.

The study discloses information concerning park administration, horticulture, and entomology courses as rated by alumni who had completed those specific courses offered to them as park administration, horticulture or entomology majors at Texas Technological College. The courses were evaluated on their importance to the graduates in preparing them for their occupational responsibilities at the time of this study. The five highest ranking course areas in park administration were landscape construction, basic park administration, municipal recreation administration, fundamentals of park planning, and landscape architecture.

The horticulture alumni ranked plant materials, turfgrass management, and home landscape design as the three course areas which prepared them the most for their occupational responsibilities at the time of this study.

Physiology and toxicology, insect ecology, and insect taxonomy were the three highest ranking course areas by the entomology graduates.

The ranking of the other agricultural course areas according to the mean values computed from the graduates' response was as follows: agricultural engineering, agronomy, range management, agricultural economics, animal husbandry, and dairy industry.

In the evaluation of the non-agricultural course areas, the five highest ranking areas, in descending order according to total mean value ratings, were speech, business administration, journalism, English, and sociology.

SPIVEY, GLENWARD L. A Study of Educational and Occupational Plans and Aspirations of Students Enrolled in Vocational Agriculture in Barbour County, Alabama. Masters study 1967-1968, Auburn University, Department of Vocational, Technical and Practical Arts Education, Auburn University, Auburn.

Purpose.--In this study an attempt was made to ascertain the educational plans and occupational aspirations of students enrolled in vocational agriculture in Barbour County, Alabama.

Method.--The information used in this study was obtained by questionnaire administered by the agriculture teachers to 270 vocational agriculture students from eight Barbour County schools offering courses in vocational agriculture. Frequency tabulation and whole-number percentages were used in analyzing the data. Chi Square was used to determine degrees of differentiation of data between respondent groupings.

Findings.--It was found that (1) the aspirations and expectations of the student were shown to increase as the educational level of parents increased. (2) The educational level of the father seemed to have no effect on the occupational aspirations and expectations of the student. (3) The occupational aspirations of the student were shown to increase as the educational level of the mother increased. (4) A higher percentage of students living on farms indicated a higher desire to farm than those not living on farms. (5) A higher percentage of non-white than white indicated a desire and the expectation to do additional studies after completing college. (6) A greater difference between occupational desires and occupational expectations was indicated by non-white students than white students. (7) No significant differences between white and non-white were revealed as to reasons which might prevent attaining chosen education and occupations. (8) Lack of education and special training was indicated as being the most prevalent reason which might prevent attaining a desired occupation. (9) Difficulty in school, scholastic standing, and not liking school were reasons most often given which might prevent obtaining a desired education. (10) Salary was given as the most influential reason in selecting an occupation. (11) Whites indicated a tendency to be more certain than non-whites toward attainment of their occupational and educational desires. (12) Urban students revealed a higher degree of certainty toward attainment of educational desires, but a lower degree toward occupational choice than rural students.

TAYLOR, JEFFERSON E. The Occupational Needs of Hawkins County, Tennessee. Thesis, M. S., 1968, University of Tennessee. 75 p. Library, University of Tennessee, Knoxville.

Purpose.--The purposes were to determine: (1) the occupational needs other than farming in Hawkins County, (2) the replacement and growth needs of these occupations, and (3) the employers' attitude toward offering high school training for these occupations, and (3) the employers' attitude toward offering high school training for these occupations.

Method.--All businesses in Hawkins County, except small establishments, were included in the study. Random samples were taken of these small concerns and 60 percent were sampled. There were 369 businesses actually surveyed. A survey form was developed by the investigator and the information was secured by personal interview.

Findings.--(1) There were approximately 4,788 males and 767 females employed in occupations other than farming. (2) The annual turnover was approximately 178 males and 94 females. (3) The additional employees needed next year due to growth were estimated to be 281 males and 58 females. (4) The total additional employees needed for the next five years due to turnover and growth were estimated to be 1,645 males and 654 females. (5) There was a shortage of trained personnel to fill the occupational needs. (6) The employees reported that on-the-job training was sufficiently given to 10 percent of the employees in sales and office work, 25 percent in mechanical skilled trades, 4 percent in building skilled trades, and 18 percent in services skilled trades. (7) Vocational classes in high school to meet the vocational needs were recommended by 83 percent of the employees in sales and office work, 81 percent in mechanical skilled trades, 61 percent in building skilled trades and 21 percent in service skilled trades. (8) A need existed in the county for expanded high school vocational programs to meet the occupational needs.

TELWAR, GUL MOHAMMED. The Influence of Occupational Commitment and Related Factors on the Choice of Majors by College of Agriculture Students at Oklahoma State University During the 1967-68 Academic Year. Dissertation Ed. D., 1968, Oklahoma State University. 82 p. Department of Agricultural Education, Oklahoma State University, Stillwater.

Purpose.--This study attempted to determine what factors influenced College of Agricultural students in their selection of a major, in their choice of a life occupation, and in their level of occupational aspiration.

Method.--A questionnaire went to 160 students selected on a stratified random sample from 1600 College of Agriculture students

attending Oklahoma State University during the 1967-68 academic year.

Findings.--The findings indicated that most students had selected their major during or prior to their freshman year. Past experience was a dominant factor in their selection of a major. It was also found that junior and senior students were more strongly committed to a major based on a measure of occupational commitment than freshmen and sophomore students. Also, the investigation revealed that a high proportion of students equated their selection of a major field with their perception of a life occupation. The study revealed that students who perceived themselves of higher ability as well as students who had an urban orientation tended to have a significantly higher occupational aspiration level.

THOMAS, MIMOSO SOGIE. A Recommended Program of Agriculture on the Secondary Level for Schools in Sierra Leone. Thesis, M. S., 1968, Virginia State College. 29 p. Library, Virginia State College Petersburg.

Purpose.--To develop a program of agriculture for the secondary schools of Sierra Leone, comparable to the programs in the schools of America.

Method.--The writer employed the following techniques in an endeavor to realize the purpose of this study: (1) Observed and participated in a comprehensive program of vocational agriculture in Halifax County for a period of nine weeks, (2) reviewed and analyzed literature pertinent to the study, (3) utilized the theoretical and practical information received during both graduate and undergraduate programs, and (4) consulted with several teachers and assistant supervisors of vocational agriculture.

Findings.--A brief summary of the findings follows: (1) A program of agricultural education in the secondary schools in the United States with certain modifications would be readily adaptable in Sierra Leone. (2) The writer found that very little had been done in the area of agricultural education on the secondary school level of Sierra Leone. (3) The inclusion of a program of agricultural education in the curriculum of the secondary schools of Sierra Leone would offer a diversity that was formally rare. (4) A youth organization within the program of agricultural education would augment instruction and facilitate leadership abilities. (5) A program of agricultural mechanics should be an integral part of the overall agricultural education curriculum and adequate housing, equipment, facilities, and other teaching aids should be made available. (6) The size of individual class enrollment

should not exceed fifteen students in order for instruction to be given to students when necessary. (7) An effective program of agricultural education in the secondary schools of Sierra Leone would have a speedy and productive effect on the economy. (8) For an effective and worthwhile program, the support of appropriate administration should be secured. (9) A program of agricultural education in secondary schools should constantly be evaluated in terms of established objectives.

TODD, JOHN D. Status of Agricultural Education in East Tennessee High Schools. Staff Study, 1968. Faculty Research Grant, Standing Council on the Improvement of Teaching and Learning and Agricultural Education Department, University of Tennessee, Knoxville.

Purpose.--The purposes were: (1) to collect information that could be used to improve the teacher education curriculum, and (2) to locate areas where problems may exist with the anticipation of trying to help improve the deficient areas.

Method.--Thirty-one secondary schools were selected at random. This represented 41 percent of the schools in East Tennessee in which vocational agriculture was taught during the school year 1967-68. A surveying instrument was developed by the researcher and the information was collected by personal interview.

Findings.--(1) There was a mean of 102.9 students per school studying vocational agriculture. The enrollment mean per teacher was 86.2 students, but this varied from 107.9 students per teacher in the small town areas to 68.4 in the cities. (2) Approximately 12 percent of the junior and senior students were obtaining non-farm occupational experiences in agriculture. (3) The total sample mean for nonfarm industries was 13.06 per school area. This varied from 26.1 in the cities to 7.4 in the rural areas. (4) The teachers were basically following the suggested core curriculum as developed in 1964 by the State Department of Education, but 64 percent of the teachers thought more time should be spent in agribusiness. (5) Seventy-four percent of the teachers indicated they needed additional shop equipment and reference material and 68 percent wanted greenhouses. (6) Approximately 57 percent of the students indicated occupational objectives in production agriculture. From 452 graduates in 1967, approximately 33 percent were engaged in agricultural occupations as their first employment. (7) Approximately 95 percent of the teachers indicated desires for inservice training in ornamental horticulture and agricultural mechanics. Twenty-two percent desired inservice training in agricultural education.

TOWNSEND, DANIEL M. Occupational Status and Educational Needs of Agricultural Economics Graduates of Texas Technological

College. Thesis, M. S. 1968, Texas Technological College, 113 p. Library, Texas Technological College, Lubbock.

Purpose.--Purposes of this study were to determine the occupational status of graduates from the Department of Agricultural Economics, Texas Technological College, to investigate factors that influenced that status, and to secure recommendations for the improvement of the academic program of the Agricultural Economics Department.

Method.--Data reported were secured from questionnaires completed by 137 agricultural economics graduates and from permanent records in the School of Agriculture. The respondents to the questionnaire represented 59 percent of the 234 alumni who had graduated during 1954 through 1966, and 71 percent of the alumni for whom correct addresses were available.

Findings.--Farming and ranching occupations were reported by 30 percent (41) of the graduates for first employment, and by 26 percent (35) for present employment.

Forty-three percent (59) of the graduates reported first employment in an off-farm agricultural occupation, and 42 percent (52) reported this type of present employment. Agricultural sales and employment with the United States Department of Agriculture dominated the types of employment reported by alumni in this occupational category.

Nonagricultural occupations were reported by 26 percent (30) of the alumni for first employment, and 33 percent (45) for present employment.

More graduates recommended increased emphasis on agricultural marketing courses than any other Agricultural Economics area. Fifty percent (66) of the total respondents recommended increased emphasis in this course area, and only three percent (4) indicated that it should be decreased or dropped. Forty-eight percent (58) of the alumni recommended increasing the emphasis in production economics courses, and only three percent (3) recommended decreasing the emphasis or dropping this course area entirely. Agricultural Economics course areas, ranked according to the percentage of alumni who recommended increased emphasis, were as follows: (1) agricultural marketing, (2) production economics, (3) agricultural records, (4) farm and ranch management, (5) agricultural pricing, (6) agricultural policies, (7) research methods, (8) resource economics, (9) agricultural statistics, and (10) agricultural cooperatives.

Rankings for other agricultural course areas, according to the percentage of alumni who recommended increased emphasis were as follows: (1) agricultural engineering, (2) range management, (3) agronomy, (4) entomology, (5) animal husbandry, (6) hor-

ticulture, and (7) dairy industry.

Rankings for all Business Administration course areas were based upon the percentage of graduates who recommended increased emphasis, and were as follows: (1) finance, (2) accounting, (3) management, (4) business law, and (5) marketing.

More alumni recommended increased emphasis in math courses than any other Arts and Sciences course area. Recommendations to increase emphasis in these course areas ranged from 62 percent (83) of the total alumni for math courses to only six percent (8) for history and government courses. Rankings for these course areas, based upon the percentage of graduates who recommended increasing each course area, were as follows: (1) math, (2) speech, (3) journalism, (4) psychology, (5) philosophy, (6) English, (7) sociology, (8) chemistry, (9) biology, and (10) History and government. Relatively large numbers of graduates indicated that they did not receive any college instruction in psychology, philosophy, sociology, and journalism. Therefore, the overall ranking of these course areas can be only moderately accepted as having been representative of the total graduates.

Specific suggestions by the alumni for improvement of the agricultural economics academic program included: (1) offer more courses in Business Administration, (2) stress effective oral and written communication, (3) teach more practicality and less theory, (4) design a curriculum specifically for students who plan to enroll in the Graduate School, (5) offer more elective courses, and (6) improve undergraduate counseling.

WIGGINS, LLOYD L. A Study of Attitudinal Changes in Student Teachers in Agricultural Education. Dissertation Ed. D., 1968, Oklahoma State University, 104 p. Department of Agricultural Education, Oklahoma State University, Stillwater.

Purpose.--The purpose of this study was to determine if the student teaching experience had significant effect upon 75 student teachers in agricultural education in causing changes in their attitude toward participation in FFA activities.

Method.--The student teaching centers were categorized according to participation in FFA activities by the district supervisors of vocational agriculture into low, medium, and high levels and each student teacher received one of these levels of treatment for seven weeks. The 75 student teachers participated in 32 centers across the state. An attitude scale was constructed and given as a pretest and as a post-test to the student teachers and as an opinionnaire to the cooperating teachers. This 25 statement attitude scale was designed to measure change in the attitude of student teachers toward FFA participation and to serve as a set of comparative opinions of the cooperating teachers. A Dogmatism

Scale developed by Rokeach was administered to each of the student teachers.

Findings.--The data obtained from the pretest and post-test responses were analyzed. A chi-square test revealed that significant differences existed between treatment levels and total attitude changes with the greatest amount of positive influence coming in the medium treatment level. A t-test showed that when student teachers changed their attitudes, they were significantly influenced to change toward the direction of the expressed opinion of their cooperating teachers. A Pearson product-moment correlation gave conclusive evidence that dogmatism scores were not correlated with total attitude change in student teachers. An analysis of variance revealed that the cooperating teachers differed significantly by treatment levels in their opinion on some but not all of the attitude statements. The student teachers were the most influenced to change their attitude toward teaching production agriculture instead of subject matter areas that tends to develop leadership. The student teachers were the least influenced to change their attitude toward incorporating new ideas into FFA banquets and conventions. From these findings, it would seem that goals should be established in selecting student teaching centers and cooperating teachers, and certain criteria for meeting these goals needs to be well known and critically evaluated on a regular basis.